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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/927,741	08/10/2001	Jonathan D. Reid	NOVLP020/NVLS-422	7293
22434	7590	02/26/2004	EXAMINER	
BEYER WEAVER & THOMAS LLP P.O. BOX 778 BERKELEY, CA 94704-0778			NICOLAS, WESLEY A	
			ART UNIT	PAPER NUMBER
			1742	

DATE MAILED: 02/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/927,741	Applicant(s) REID ET AL. <i>eb</i>	
	Examiner Wesley A. Nicolas	Art Unit 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2004.  
 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☒ Claim(s) 1-23 and 41-47 is/are allowed.  
 6) ☒ Claim(s) 24-40 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

This is in response to the Amendment and RCE submitted January 7, 2004. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-47 are currently pending in this application.

#### **Continued Examination Under 37 CFR 1.114**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 7, 2004, has been entered.

#### **Claim Rejections - 35 USC § 102**

1. Claims 1-2, 8-13, 16, 24-27, 29, 32-34, 37, and 39-40 are rejected under 35 U.S.C. 102(e) as being anticipated by Hanson et al. (U.S. 2002/0084183).

The rejection of claims 1-2, 8-13, and 16 have been **withdrawn** in view of the convincing arguments submitted by Applicant in the RCE submitted January 7, 2004.

The rejection of claims 24-27, 29, 32-34, 37, and 39-40 has been **maintained** and is as set forth in the previous Office action mailed May 15, 2003, which is

incorporated herein. Examiner's arguments for maintaining the rejection are set forth below in the "Response to Argument/Amendment."

**Claim Rejections - 35 USC § 103**

2. Claims 3-4, 18-21 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanson et al. (U.S. 2002/0084183) as applied to claims 1, 2, and 29 above, and further in view of Keigler (6,540,899).

The rejection of claims 3-4 and 18-21 have been **withdrawn** in view of the convincing arguments submitted by Applicant in the RCE submitted January 7, 2004.

The rejection of claim 30 has been **maintained** and are as set forth in the previous Office action mailed May 15, 2003, which is incorporated herein. Examiner's arguments for maintaining the rejection are set forth below in the "Response to Argument/Amendment."

3. Claims 14-15, 17, 22-23, 35-36, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanson et al. (U.S. 2002/0084183) as applied to claims 1 and 24 above, and further in view of Schuster et al. (5,000,827).

The rejection of claims 14-15, 17, and 22-23 have been **withdrawn** in view of the convincing arguments submitted by Applicant in the RCE submitted January 7, 2004.

The rejection of claims 35-36, and 38 have been **maintained** and are as set forth in the previous Office action mailed May 15, 2003, which is incorporated herein.

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Examiner's arguments for maintaining the rejection are set forth below in the "Response to Argument/Amendment."

4. Claims 5-7 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanson et al. (U.S. 2002/0084183) as applied to claims 1 and 24 above, and further in view of Uzoh et al. (6,413,388).

The rejection of claims 5-7 have been **withdrawn** in view of the convincing arguments submitted by Applicant in the RCE submitted January 7, 2004.

The rejection of claim 31 has been **maintained** and are as set forth in the previous Office action mailed May 15, 2003, which is incorporated herein. Examiner's arguments for maintaining the rejection are set forth below in the "Response to Argument/Amendment."

**Allowable Subject Matter**

5. Claims 1-23 and 41-47 are allowed over the prior art of record.

6. Claim 28 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter:

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Regarding claim 1, the specific apparatus for engaging a work piece during plating which includes, *inter alia*, a cup arranged to support the workpiece and a field shaping element designed for connection with the cup were not taught by the prior art of record. The closest prior art of Hanson et al. fails to specifically teach a field shaping element designed for connection with the cup where the cup is arranged to support the workpiece. In addition, Applicant's reasons for allowance set forth in the paper submitted January 7, 2004 on pages 8-10 are further deemed sufficient and are incorporated herein.

Regarding claim 28, the specific immersion of the work piece that takes place at an angle in which the plating surface is not parallel to the plane defined by the plating fluid surface was not taught or suggested by the prior art of record.

Regarding claim 41, the specific apparatus for engaging a workpiece during plating which includes a cup defining an interior region and a lip within the interior region arranged such that the lip can support the workpiece in a first plane wherein the cup has a first surface and at least a portion of the first surface being curved and substantially non-parallel to the first plane was not taught or suggested by the prior art of record. In addition, Applicant's reasons for allowance set forth in the paper submitted January 7, 2004 on pages 8-10 are further deemed sufficient and are incorporated herein.

Regarding claim 42, the specific apparatus for engaging a workpiece during plating which includes a field shaping element defining a snorkel-shaped flow path between the field shaping element and the cup was not taught or suggested by the prior art of record. In addition, Applicant's reasons for allowance set forth in the paper

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submitted January 7, 2004 on pages 11-12 are further deemed sufficient and are incorporated herein.

Regarding claim 43, the specific apparatus for engaging a workpiece during plating which includes a cup with a lip that can support a workpiece wherein the cup has a plurality of flow holes defining a plurality of flow paths for plating fluid to flow from the inside of the apparatus to outside the apparatus was not taught or suggested by the prior art of record. In addition, Applicant's reasons for allowance set forth in the paper submitted January 7, 2004 on pages 12-13 are further deemed sufficient and are incorporated herein.

#### **Response to Argument/Amendment**

8. Applicant's arguments filed January 7, 2004, have been fully considered but they are not persuasive.

Regarding claim 24, Applicant asserts Hanson et al. does not teach, suggest or indicate a flow path "having an inlet on the inside of the apparatus and an outlet on the outside of the apparatus and positioned such that the outlet is at a higher elevation than the inlet, whereby gas present in a portion of the plating fluid in the flow path travels toward the outlet due to its buoyancy." (Paper submitted 1/7/04, page 11). Examiner must respectfully disagree for the following reasons:

First, Hanson et al. does show a flow path defined by the cup (Fig. 7, numeral 60) and a field shaping element (Fig. 7, numeral 200). Although Hanson et al. does not indicate specific arrows showing a flow path, fluid still flows in between the cup (Fig. 7,

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numeral 60) and the field shaping element (Fig. 7, numeral 200), such flow is discussed in ¶ 0054.

Second, it appears that Examiner and Applicant have a differing definition of what constitutes the "inside of the apparatus" and the "outside of the apparatus." Examiner is interpreting "inside the apparatus" as being the area where the workpiece is processed. Therefore, the flow path from the inside to the outside of the apparatus is the region between numerals 60 and 200 in Fig. 7 of Hanson et al.

Applicant further asserts that "Claims 22-40 are therefore patentable as being dependent from patentable claim 1." (Paper submitted 1/7/04, page 11). This is clearly incorrect. Only claims 22-23 are in some way dependent from claim 1 (actually, they are dependent from claim 17, which is dependent on claim 14, which is dependent on claim 1). Claims 25-40 are in some way dependent from claim 24, not claim 1.

With respect to the dependent claims, since Applicant has not argued the merits of Examiner's rejection of said dependent claims, therefore their rejection has been maintained.

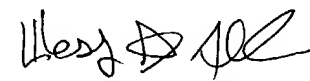


**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wesley Nicolas whose telephone number is (571) 272-1247. The examiner can normally be reached on Mon.-Thurs. from 7 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached at (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Wesley A. Nicolas  
Primary Examiner

February 22, 2004